REMARKS

This Amendment is being filed concurrently with a Request for Continued Examination (RCE).

The Final Office Action mailed December 9, 2004, has been carefully reviewed and by this Amendment, Applicants have amended claims 15, 27, 28 and 30, and added claims 32 and 33. Claims 15, 19-28, 30, 32 and 33 are pending in the application. Claims 15, 27, 28 and 30 are independent.

The Examiner rejected claims 15, 19, 20, 24, 25, 27 and 28 under 35 U.S.C. 103(a) as being unpatentable over Applicants' prior art disclosure in view of ordinary skill in the art and further in view of U.S. Patent No. 4,966,802 to Hertzberg. Also under 35 U.S.C. 103(a), the Examiner rejected claim 30 as being unpatentable over Applicants' prior art disclosure in view of Hertzberg, further in view of ordinary skill in the art, and further in view of EP 0 532 016 A1 to Padden.

By this Response, Applicants request favorable reconsideration of the pending claims as amended herein in view of the evidence of non-obviousness represented by the Declaration of Helmut Kaufmann and Rudolf Gradinger, as provided herewith in accordance with 37 C.F.R. 1.132.

Mssrs. Kaufmann and Gradinger are employed by a third party R&D company in Austria (paragraph 1). As set forth in respective paragraphs in their combined Declaration, Mssrs. Kaufmann and Gradinger have extensive education and experience in the field of composite structures and materials (paragraphs 2 and 3). In view of their qualifications, their opinion as to the level of ordinary skill in the aviation field as related to composite technology serves as evidence of the non-obviousness to such persons of making a fitting of synthetic composite material.

More particularly, Mssrs. Kaufmann and Gradinger state in paragraphs 6-8 of their Declaration that, prior to their learning of Applicants' invention in 2004, it was conventional to make aircraft spoiler hinges of metal, and to use metal fasteners for secure connection of the metal fittings to the movable parts. They state that they were surprised when they heard of the design for a carbon fiber reinforced plastic/resin transfer molding aircraft spoiler hinge, as claimed by the present invention, further stating that an RTM approach for a hinge or fitting design for use with aircraft spoilers had not previously been used. The RTM approach provides particular benefit in that it offers more degrees of freedom in aligning the fibers along the main stresses and thus is the first appropriate composite

manufacturing method for bulky structurally loaded parts (paragraph 9).

Mssrs. Kaufmann and Gradinger also state the additional benefit realized through the present invention, achieved not only by the use of synthetic composite material made by the RTM approach, but also through the use of glue as a fastening element, of reducing the weight of the aircraft, an important consideration in aviation (paragraphs 10 and 11).

Finally, the reduced thermal stresses realized through the use of composite material for both the fitting and the spoiler according to the present invention is stated to be an improvement over conventional metal fittings where the thermal stresses between the metal and the CFRP at the bearing of the center hinge fitting have to be considered and accommodated (paragraph 12).

Clearly, while the RTM method was known for other applications, as noted in Applicants' prior art disclosure and relied upon by the Examiner, persons of ordinary skill in the art did not consider a hinge fitting made of synthetic composite material according to the RTM method to be suitable for the intended use of a high-load aircraft fitting, as evidenced by the Kaufmann and Gradinger Declaration. Therefore, selection of such

material was not a matter of obvious design choice but instead a non-obvious departure from known solutions.

The addition of Hertzberg adds nothing to overcome the insufficiency in Applicants' prior art disclosure because Hertzberg also fails to disclose the use of synthetic composite materials with high-load moving parts, specifically a RTM hinge fitting. Such a fitting, which secures a spoiler, a landing flap or a control surface, all of which are subjected to high loads and critical to aircraft take-off, landing, and moving, is categorically different from the laminated *panel* construction in which resin composites are used merely to resist delamination, as taught by Hertzberg.

In view of the foregoing evidence relating to the level of ordinary skill in the art, as provided by third parties with respect to the present invention, claims 15, 27, 28 and 30 are clearly patentable over the prior art.

Claims 19-26 and new claims 32 and 33 are also in condition for allowance as claims properly dependent on an allowable base claim and for the subject matter contained therein. Favorable consideration is requested.

Should the Examiner have any questions or comments, the Examiner is cordially invited to telephone the undersigned

attorney so that the present application can receive an early Notice of Allowance.

Respectfully submitted,

JACOBSON HOLMAN PLLC

By Harvey B. Jacobson, Jr. by Sarah C. Bailey
Harvey B. Jacobson, Jr.
Reg. No. 20,851 Reg No 40,495

400 Seventh Street, NW
Washington, D.C. 20004-2201
Telephone: (202) 638-6666
Atty. Docket: P67552US0
Date: May 6, 2005
HBJ:SCB
R:\SBAILEY\05-05\P67552US.114